

41. The process of claim 32, wherein the *E. coli* strain is resistant to

42. The process of claim 32, wherein the *E. coli* strain is resistant to

43. The process of claim 32, wherein the *E. coli* strain is resistant to

44. The process of claim 32, wherein the *E. coli* strain is resistant to

45. The process of claim 32, wherein the *E. coli* strain is resistant to

46. The process of claim 32, wherein the *E. coli* strain has the

47. The process of claim 32, wherein the *E. coli* strain has the

- (a) the strain deposited as NRRL B-30318; and
- (b) the strain deposited as NRRL B-30319.

48. The process of claim 32, wherein the *E. coli* strain is a strain

- (a) the strain deposited as NRRL B-30318; and
- (b) the strain deposited as NRRL B-30319.

33. The process of claim 32, wherein the *E. coli* strain produces between about 100 and about 140 g/L of L-threonine by about 48 hours of growth in culture.

34. The process of claim 33, wherein the *E. coli* strain produces between about 110 and about 130 g/L of L-threonine by about 48 hours of growth in culture.

35. The process of claim 33, wherein the *E. coli* strain produces between about 110 and about 120 g/L of L-threonine by about 48 hours of growth in culture.

36. The process of claim 32, wherein the non-native promoter is selected from the group consisting of the *tac* promoter, the *lac* promoter, the *trp* promoter, the *lpp* promoter, the P<sub>L</sub> promoter and the P<sub>R</sub> promoter.

37. The process according to claim 36, wherein the non-native promoter is the *tac* promoter.

38. The process of claim 32, wherein the threonine operon contains a gene that encodes a feedback-resistant aspartate kinase-homoserine dehydrogenase.

39. The process according to claim 32, wherein the *E. coli* strain contains a defective threonine dehydrogenase gene on the chromosome.

40. The process of claim 32, wherein the threonine operon is obtained from the strain deposited as ATCC Deposit No. 21277.

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24. The *E. coli* strain of claim 23 which produces between about 110 and about 120 g/L of L-threonine by about 48 hours of growth in culture.

25. The *E. coli* strain of claim 21 comprising a threonine operon obtained from the strain deposited as ATCC Deposit No. 21277.

26. The *E. coli* strain of claim 21 which is resistant to threonine raffinose.

27. The *E. coli* strain of claim 21 which is resistant to borrelidin.

28. The *E. coli* strain of claim 21 which is resistant to cyclopentanecarboxylic acid.

29. The *E. coli* strain of claim 21 which is resistant to threonine raffinose and borrelidin.

30. The *E. coli* strain of claim 21 which is resistant to threonine raffinose and cyclopentanecarboxylic acid

31. The *E. coli* strain of claim 21, wherein said strain is selected from the group consisting of:

- (a) the strain deposited as NRRL B-30318; and
- (b) the strain deposited as NRRL B-30319.

32. A process for producing L-threonine, which comprises the steps of:

- (a) culturing an *E. coli* strain of claim 21 in a culture medium; and
- (b) recovering L-threonine from the culture medium.

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15. The process of claim 1, wherein the mutagenized cells are screened to identify *E. coli* which are resistant to cyclopentanecarboxylic acid.

16. The process of claim 1, wherein the mutagenized cells are screened to identify *E. coli* which are resistant to threonine raffinose and borrelidin.

17. The process of claim 1, wherein the mutagenized cells are screened to identify *E. coli* which are resistant to threonine raffinose and cyclopentanecarboxylic acid.

18. The process of claim 1, wherein the *E. coli* strain has the characteristics of the strain deposited as NRRL B-30318.

19. The process of claim 1, wherein the *E. coli* strain has the characteristics of the strain deposited as NRRL B-30319.

20. An *E. coli* strain produced by the process of claim 1.

21. An *E. coli* strain comprising at least one chromosomally integrated threonine operon operably linked to a non-native promoter,

wherein said *E. coli* strain produces between about 95 and about 150 g/L of L-threonine by about 48 hours of growth in culture, and

wherein said *E. coli* strain is not strain KY10935, strain ADM TH1.2, or strain ADM Kat13.

22. The *E. coli* strain of claim 21 which produces between about 100 and about 140 g/L of L-threonine by about 48 hours of growth in culture.

23. The *E. coli* strain of claim 22 which produces between about 110 and about 130 g/L of L-threonine by about 48 hours of growth in culture.

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6. The process of claim 1, wherein two or three threonine operons are inserted into the chromosome of the *E. coli*.

7. The process of claim 6, wherein the individual threonine operons are operably linked to at least two different non-native promoters.

8. The process of claim 1, wherein the non-native promoter is selected from the group consisting of the *tac* promoter, the *lac* promoter, the *trp* promoter, the *lpp* promoter, the P<sub>L</sub> promoter and the P<sub>R</sub> promoter.

9. The process according to claim 8, wherein the non-native promoter is the *tac* promoter.

10. The process of claim 1, wherein the threonine operon contains a gene that encodes a feedback-resistant aspartate kinase-homoserine dehydrogenase.

11. The process according to claim 1, wherein the *E. coli* strain contains a defective threonine dehydrogenase gene on the chromosome.

12. The process of claim 1, wherein the threonine operon is obtained from the strain deposited as ATCC Deposit No. 21277.

13. The process of claim 1, wherein the mutagenized cells are screened to identify *E. coli* which are resistant to threonine raffinose.

14. The process of claim 1, wherein the mutagenized cells are screened to identify *E. coli* which are resistant to borrelidin.

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WE CLAIM:

1. A process for producing an *Escherichia coli* strain producing between about 95 and about 150 g/L of L-threonine by about 48 hours of growth in culture, said process comprising:

(a) inserting into the chromosome of an *E. coli* at least one threonine operon operably linked to a non-native promoter to produce a parent strain; and

(b) performing at least one cycle of mutagenesis on the parent strain, followed by screening the mutagenized cells to identify *E. coli* which produce between about 95 and about 150 g/L of L-threonine by about 48 hours of growth in culture.

2. The process of claim 1, wherein the *E. coli* strain produces between about 100 and about 140 g/L of L-threonine by about 48 hours of growth in culture.

3. The process of claim 2, wherein the *E. coli* strain produces between about 110 and about 130 g/L of L-threonine by about 48 hours of growth in culture.

4. The process of claim 3, wherein the *E. coli* strain produces between about 110 and about 120 g/L of L-threonine by about 48 hours of growth in culture.

5. The process of claim 1, wherein mutagenesis is performed using an agent selected from the group consisting of:

- (a) an alkylating agent;
- (b) an intercalating agent; and
- (c) ultraviolet light.

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49. An *E. coli* strain which is resistant to threonine raffinose and produces between about 95 and about 150 g/L of L-threonine by about 48 hours of growth in culture.

50. The *E. coli* strain of claim 49 which produces between about 100 and about 140 g/L of L-threonine by about 48 hours of growth in culture.

51. The *E. coli* strain of claim 50 which produces between about 110 and about 130 g/L of L-threonine by about 48 hours of growth in culture.

52. The *E. coli* strain of claim 51 which produces between about 110 and about 120 g/L of L-threonine by about 48 hours of growth in culture.

53. The *E. coli* strain of claim 49, wherein the threonine operon encodes a feedback-resistant aspartate kinase I-homoserine dehydrogenase I gene (*thrA*), a homoserine kinase (*thrB*) gene, and a threonine synthase gene (*thrC*).

54. The *E. coli* strain of claim 49, wherein the threonine operon is obtained from the strain deposited as ATCC Deposit No. 21277.

55. The *E. coli* strain of claim 49 which contains a defective threonine dehydrogenase gene on the chromosome.

56. The *E. coli* strain of claim 49 which is resistant to borrelidin or cyclopentanecarboxylic acid.

57. The *E. coli* strain of claim 49 which has the characteristics of the strain deposited as NRRL B-30319.

58. An *E. coli* strain selected from the group consisting of:

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- (a) the strain deposited as NRRL B-30316; and
- (b) the strain deposited as NRRL B-30317.

59. An *E. coli* strain having enhanced L-threonine production which is resistant to cyclopentanecarboxylic acid.

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